Abstract

Effect of Conjugated linoleic acid supplemented diet on levels of interlukin-6 in COPD patients

Background and Objective: Chronic obstructive pulmonary disease (COPD) is characterized with systemic inflammation and accelerated inflammaging of the lungs. Some studies have shown that conjugated linoleic acid (CLA) has anti-inflammatory effects. The aim of the present study was to evaluate the effect of CLA supplementation on the serum levels of interleukin (IL-6) in patients with COPD.

Methods: 82 patients with stable COPD were selected to be studied in a double blind clinical trial. Subjects were randomly assigned to two groups: placebo (n=42) and supplementation (n=40, 3.2 g CLA daily). Forced expiratory volume in one second (FEV1%), CAT score and the serum levels of IL-6 were measured at the baseline and also six weeks after the intervention. In addition, the study parameters in the two groups were compared based on the Global Initiative for Chronic Obstructive Lung Disease (GOLD) criteria.

Results: After supplementation with CLA, the serum levels of IL-6 and CAT score significantly decreased ($p<0.05$ and $p<0.001$ respectively). In addition, the FEV1 ($p<0.001$) significantly increased in the supplementation group. Based on GOLD criteria, the decrease in IL-6 serum levels were found to be statistically significant in stages III-IV in the supplementation group ($P<0.01$)

Conclusions: Supplementation with CLA can modify the inflammatory markers and improve the health status of COPD patients. The results suggest that CLA supplementation in COPD patients can be useful in the management of the disease.

Key Words: COPD, CLA, IL-6, COPD Assessment Test